DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	LITTLE POND	Lake Area (ha):	7.49
Town:	MEREDITH	Maximum depth (m):	3.7
County:	Belknap	Mean depth (m):	1.2
River Basin:	Merrimack	Volume (m^3):	92500
Latitude:	43°40'11" N	Relative depth:	1.2
Longitude:	71°28'10" W	Shore configuration:	1.44
Elevation (ft):	635	Areal water load (m/yr):	12.19
Shore length (m):	1400	Flushing rate (yr^{-1}):	9.90
Watershed area (ha):	199.0	P retention coeff.:	0.53
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:		4 February 2002	17 July 2001
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 40%	CHRYSOSPHAERELLA 25%
	#2	DINOBRYON 20%	STAURASTRUM 20%
	#3	PENNATE DIATOM SPP 15%	DINOBRYON 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			6.40
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 43%	KERATELLA 42%
	#2	CHROMOGASTER 28%	NAUPLIUS LARVA 23%
	#3		POLYARTHRA 13%
ROTIFERS/LITER		58	678
MICROCRUSTACEA/LITER		10	324
ZOOPLANKTON ABUNDANCE (#/L)		68	1017
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.0
BOTTOM DISSOLVED OXYGEN (mg/L)		8.7	4.9
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: LITTLE POND
Town: MEREDITH

	4 February 2002		17 July 2001		
DEPTH (m)	1.0		1.0		2.0
pH (units)	6.3		6.8		6.7
A.N.C. (Alkalinity)	7.0		7.0		6.7
NITRATE NITROGEN	0.11		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.40		0.30		0.40
TOTAL PHOSPHORUS	0.014		0.012		0.011
CONDUCTIVITY (μmhos/cm)	101.3		84.4		84.5
APPARENT COLOR (cpu)	40		48		48
MAGNESIUM			0.83		
CALCIUM			3.6		
SODIUM			10.2		
POTASSIUM			0.73		
CHLORIDE	23		19		19
SULFATE	4		3		3
TN : TP	36		25		36
CALCITE SATURATION INDEX			3.1		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2001

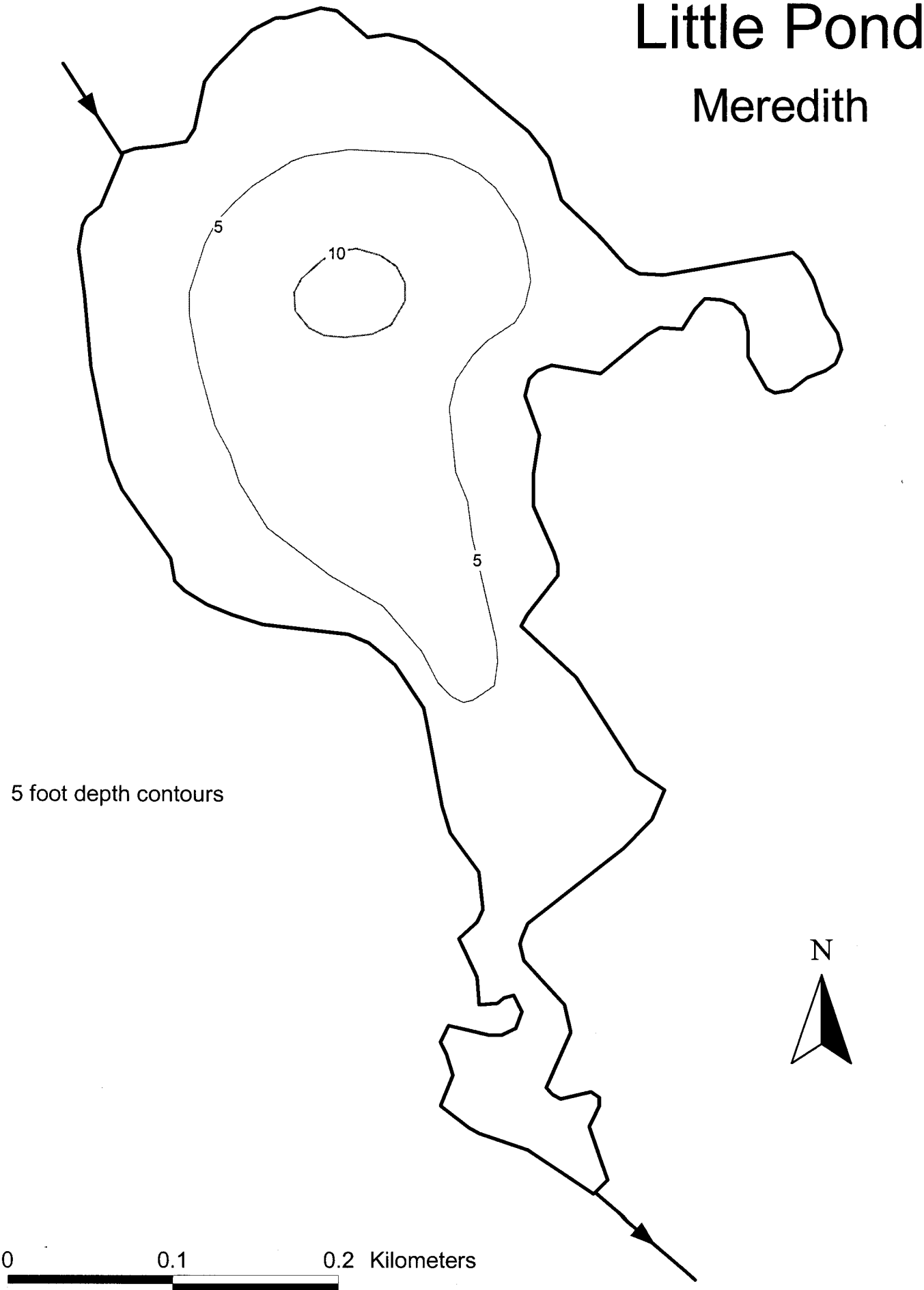
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	5	1	10	Eutro.

COMMENTS:

1. Previously surveyed in 1981; no change in trophic class and little change in water quality.
2. No public access; accessible by canoe over private property.
3. No motor boats allowed.
4. This is a shallow, eutrophic pond with abundant rooted plant growth. Somewhat elevated sodium and chloride levels suggest some salt runoff.
5. Good variety of net plankton observed; 20 phytoplankton and 12 zooplankton genera recorded. Zooplankton were abundant indicating that the abundant primary productivity of the pond had passed up to the next level in the food chain.

Little Pond

Meredith



5 foot depth contours

0 0.1 0.2 Kilometers

FIELD DATA SHEET

LAKE: LITTLE POND
DATE: 07/17/2001

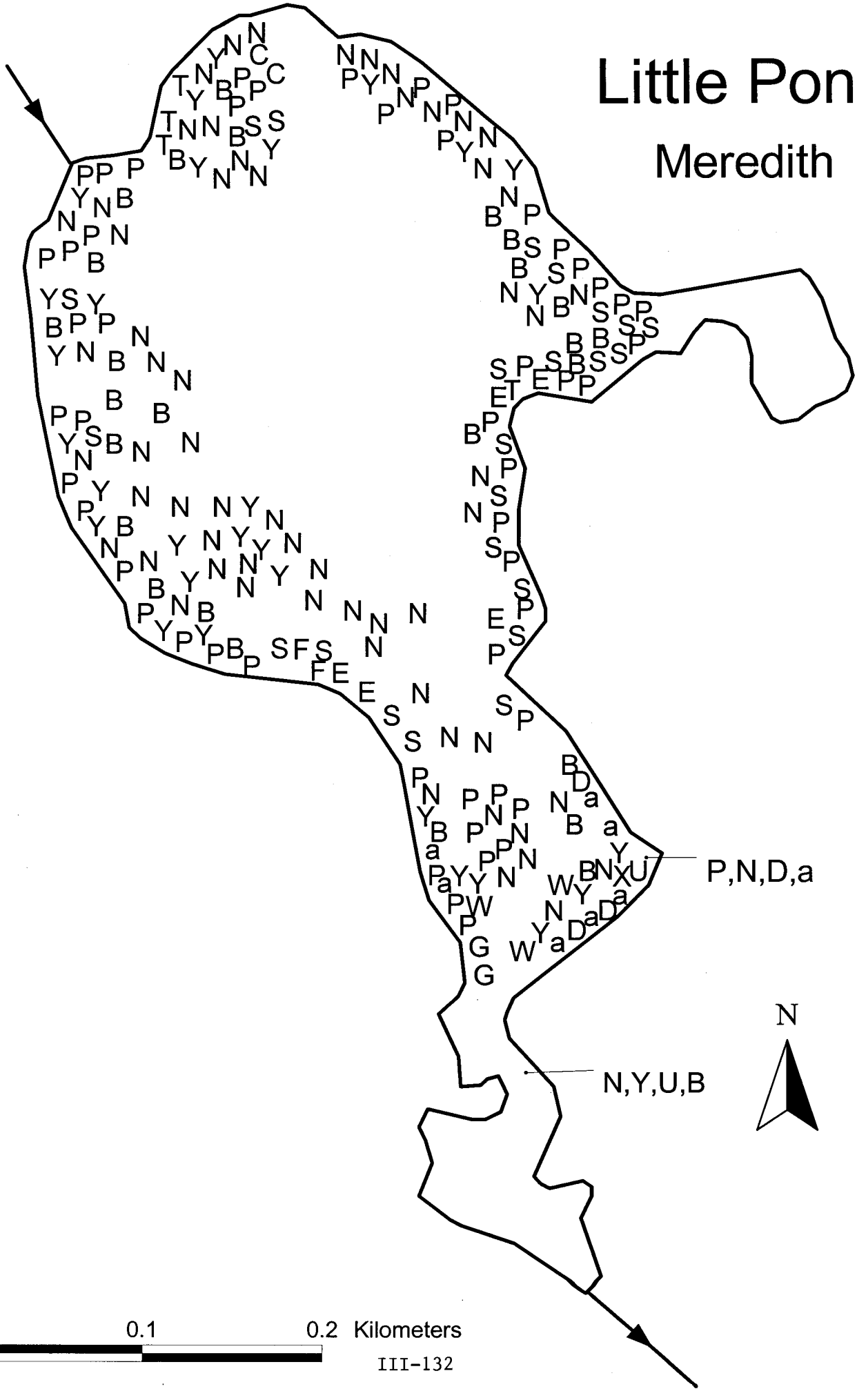
TOWN: MEREDITH
WEATHER: Partly cloudy & breezy

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	23.7	7.0	83 %
	1.0	23.5	7.0	82 %
	2.0	22.4	5.7	66 %
	2.5	22.0	4.9	56 %

SECCHI DISK (m): 2.0
BOTTOM DEPTH (m): 2.9
TIME: 1200

COMMENTS:

*Dissolved oxygen values are in mg/L


Little Pond
Meredith
P,N,D,a
N,Y,U,B
N
0
0.1
0.2 Kilometers

AQUATIC PLANT SURVEY

LAKE: LITTLE POND TOWN: MEREDITH DATE: 07/17/2001

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Abundant
N	Nymphaea	White water lily	Abundant
Y	Nuphar	Yellow water lily	Common
U	Utricularia	Bladderwort	Common/Abun
S	Sparganium	Bur reed	Common
B	Brasenia schreberi	Water shield	Common/Abun
X		Sterile thread-like leaf	Common
D	Decodon verticillatus	Swamp loosestrife	Scattered
a	Peltandra virginica	Arrow arum	Scattered
W	Potamogeton	Pondweed	Common
G	Gramineae	Grass family	Scattered
F	Nymphoides cordatum	Floating heart	Scattered
E	Eriocaulon septangulare	Pipewort	Scattered
T	Typha	Cattail	Scattered
C	Cyperaceae	Non-flowering sedge	Scattered

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. The narrow outlet cove and the eastern cove were non-navigable because of dense plant growth. Plants are not listed in these areas on the map – they should be labeled "wetlands".